

ABSTRACT OF THE DISCLOSURE

Oil is recovered from a borehole using a pump having limited high temperature breakdown resistance. The pump is located in a borehole having a cooling zone, in which the temperature of the well fluid is reduced to, or below, the temperature at which the temperature breakdown resistance of the pump is commercially acceptable. In one embodiment, the pump is a positive displacement pump which is mechanically driven from the well head location, such as through a rotating rod. The cooling zone is provided by positioning and controlling the pump to maintain a sufficiently low pressure at the pump intake to cause a portion of the liquid well fluid to vaporize prior to entry of the liquid into the pump, creating bubbles which pass upwardly in the wellbore in a zone passing the pump. The evolution of the vapor cools the well fluid to the acceptable temperature.